NAGNAVOX SERVICE MANUAL

SERVICE DEPARTMENT/ MAGNAVOX CONSUMER ELECTRONICS COMPANY FORT WAYNE, INDIANA 46804

File: Volume 13
Miscellaneous Section
First Issue: October, 1977

Manual No. 6507

Scanned by Sly DC (2018)

BH7510 ODYSSEY



GENERAL INFORMATION

The BH7510 can be powered by either 6 "C" Cells or an optional AC to DC 9 volt adaptor.

The BH7510 features games of Smash, Tennis, Hockey and Practice and as an extra challenge has switchable skill levels of amateur and pro which automatically adjust player size, and speed of the ball. Deflection of the ball is determined by where it strikes the player.

Automatic features include "on-screen" scoring which

awards a point to the appropriate player or team each time the ball leaves the playing area. Automatic serve will return the ball into play from the side that was awarded the point. After either side has scored 15 points the ball will continue to be served but neither player will be able to return it.

During play a different audio tone is generated each time the ball hits a player, a wall, or a point is scored. No provisions are made to turn the sound on or off.

SERVICE ADJUSTMENTS

2 MHz Oscillator Adjustment

1. Connect a frequency counter to Pin 17 of IC1 and adjust C4 for 2.01 MHz ± 1%.

Channel 3 & 4 RF Oscillator Adjustment

- 1. Connect the Odyssey to an operating TV and defeat the TV AFT.
- 2. Place the TV channel selector to Channel 3, mechanically center the fine tuning, and set the Odyssey Channel

select switch to Channel 3.

- 3. While observing the game display, adjust L3 for optimum response.
- 4. Change the TV and the Odyssey to Channel 4 operation.
- 5. While observing the game display, adjust C5 for optimum response.
- 6. Repeat Steps 2 thru 5 until Channel 3 and 4 game displays are equal in quanity.

TYPICAL OPERATION (TENNIS)

Connect the 300 ohm twin lead from the Antenna/Game Switch to the VHF, 300 ohm antenna terminals of a properly adjusted and operating television receiver. Connect the game cord cable from the Odyssey unit to the Antenna/Game switch and place the Game/TV Switch in the "Game" position.

Place the Channel Switch on the Odyssey to either Channel 3 or 4 and the television VHF Channel Selector to the same channel.

Set the Game Switch to the center position and Skill to the desired skill level. Move the Power/Reset Switch to the center position and fine tune the television if necessary. When play is ready to begin, move the Power/Reset Switch to the Reset Position and allow it to return to the center position. The score is now set to zero and the game begins. When either contestant reaches 15 points the players will be unable to return the ball and a new game will have to be started.

BH7510 REPLACEMENT PARTS LIST

Note: When ordering replacement parts please specify the part number as shown in this list including Description, Chassis, and Model Number. Complete information will help expedite the order. Replacement parts may occasionally differ in part number or value from the Factory installed part. In either event the replacement part has been chosen to provide equal or improved performance.

REF.	DESCRIPTION	PART NO.
	COILS	
L2 L4	Peaking Coil, 100 uHy Peaking Coil, 1 mHy	361444-1015
	CAPACITORS Values, tolerances & voltage ratings for capacitors not listed are shown on the schematic, or are 10%, 500V.	
C1 C2 C3 C4 C5 C8 C9 C10 C23	Electrolytic, 470 ufd., 16V Electrolytic, 470 ufd., 16V Ceramic, 83 pf., 5%, 500V, N750 Trimmer, 6-38 pf. Ceramic, 82 pf.,5%,500V,N1500 Metalized Polyester, .068 ufd.,10%, 400V Electrolytic, 470 ufd.,16V Metalized Polyester, .068 ufd.,10%, 400V Ceramic, 10 pf.,5%,500V,NPO	270109-5215 270109-5215 250549-8205 260220-2 250529-8205 250655-6839 270109-5215
C23 C24 C25	Ceramic, 22 pf.,10%,500 V,NPO Ceramic, 1.5 pf., ± .1 pf.,500 V,NPO	250546-1005
	Values, tolerances & wattages for resistors not listed are shown on the schematic, or are 5%, ¼W.	

REF.	DESCRIPTION	PART NO.
	CONTROLS & SWITCHES	
R8 R10 S1 S2 S3	500K, Right Player Control 500K, Left Player Control On-Off/Reset Switch Skill Switch Game Switch	220337-3 220337-3 160546-5 160546-7 160546-7
	SEMICONDUCTORS	
D2 D3 D4 D5 D6 D7 D8 IC1 Q1 Q2 Q3 Z1 J1	Silicon Diode Integrated Circuit NPN Silicon NPN Silicon NPN Silicon Zener Diode External Power Jack Speaker 2¼" Speaker Holding Strap Battery Connector	530181-1001 530181-1001 530181-1001 530181-1001 530181-1001 530181-1001 612114-1 610224-1 610139-3 610232-2 530073-1039 181139-2 580108-1 143856-1 181096-3

RF MODULATOR REPLACEMENT PARTS LIST

The same present the toyeld are the many at the same and the same and the same at the same

The evisa offerious and a second of the seco

the state of the s

DESCRIPTION	PART NO.
COILS	
Peaking Coil, 12 uHy Peaking Coil, 12 uHy Oscillator Coil	361425-120 361425-120 361398-21
Peaking Coil, 12 uHy Filtering Coil	361425-120 361558-4
CAPACITORS Values, tolerances & voltage ratings for capacitors not listed are shown on schematic, or are 10%, 500V.	
Ceramic, 1'0 pf.,5%,500V, NPO Ceramic, 10 pf.,5%,500V,NPO	250546-1005
Ceramic, 2.2 pf., ± .25, 500V,NPO Ceramic, 10 pf.,5%,500V,NPO Ceramic, 33 pf.,5%,500V,NPO	260220-5 250546-2297 250546-1005 250546-3305 250666-6205
	COILS Peaking Coil, 12 uHy Peaking Coil, 12 uHy Oscillator Coil Peaking Coil, 12 uHy Filtering Coil CAPACITORS Values, tolerances & voltage ratings for capacitors not listed are shown on schematic, or are 10%, 500V. Ceramic, 10 pf.,5%,500V, NPO Ceramic, 10 pf.,5%,500V,NPO Trimmer, 2-22 pf.,100V Ceramic, 2.2 pf., ± .25, 500V,NPO Ceramic, 10 pf.,5%,500V,NPO Ceramic, 10 pf.,5%,500V,NPO

The stationary of the second of the second second

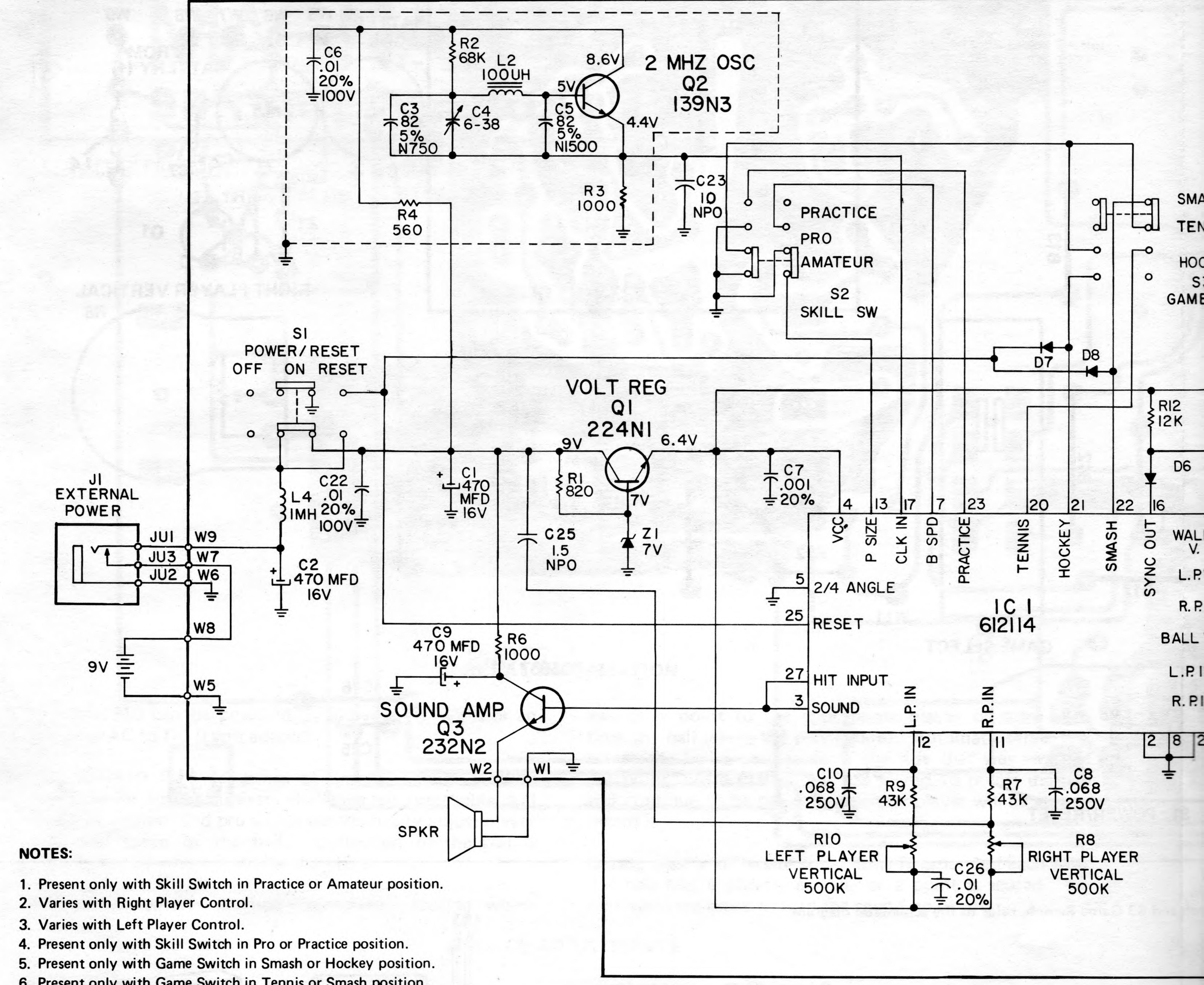
estables della compania della della della della compania della della della della della della della della della

CONTRACTOR OF THE STATE OF THE

Tibut 2 valvale and administration of administration from the contract of the contract of

tel el svertin ernet ran a bine lad entri tradició

REF.	DESCRIPTION	PART NO.	
	RESISTORS Values, tolerances, & wattages for resistors not listed are shown on the schematic, or are 5%, ¼W.		
	SWITCHES		
S1	Channel Select Switch	160556-2	
	SEMICONDUCTORS		
D1 Q1	Germanium Diode NPN Transistor	530105-1001610139-2	
	MISCELLANEOUS		
J1	RF Module Top Cover RF Module Bottom Cover RF Output Jack	733293-3 733293-5 181095-4 461218-6	
	RF Cable Assembly -Coax Plug Complete RF Module Assembly	180903-1	




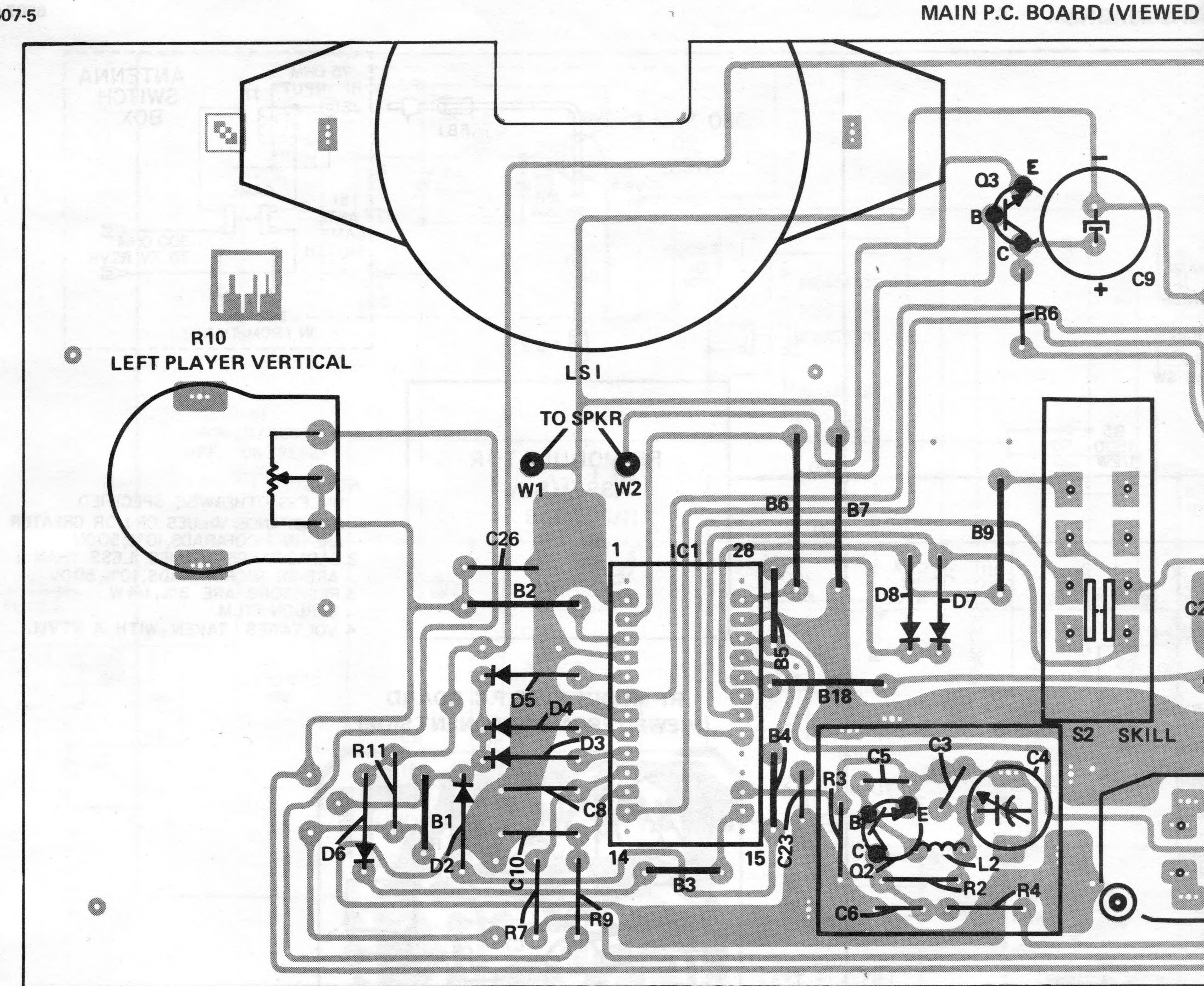
6.	Present only with	Game	Switch in	lennis or	Smash position.
7.	Present only with	Game	Switch in	Tennis or	Hockey position.

9. Grounded momentarily when Switch S1 is pushed into Reset.

8. Present only with Skill Switch in Amateur or Pro position.

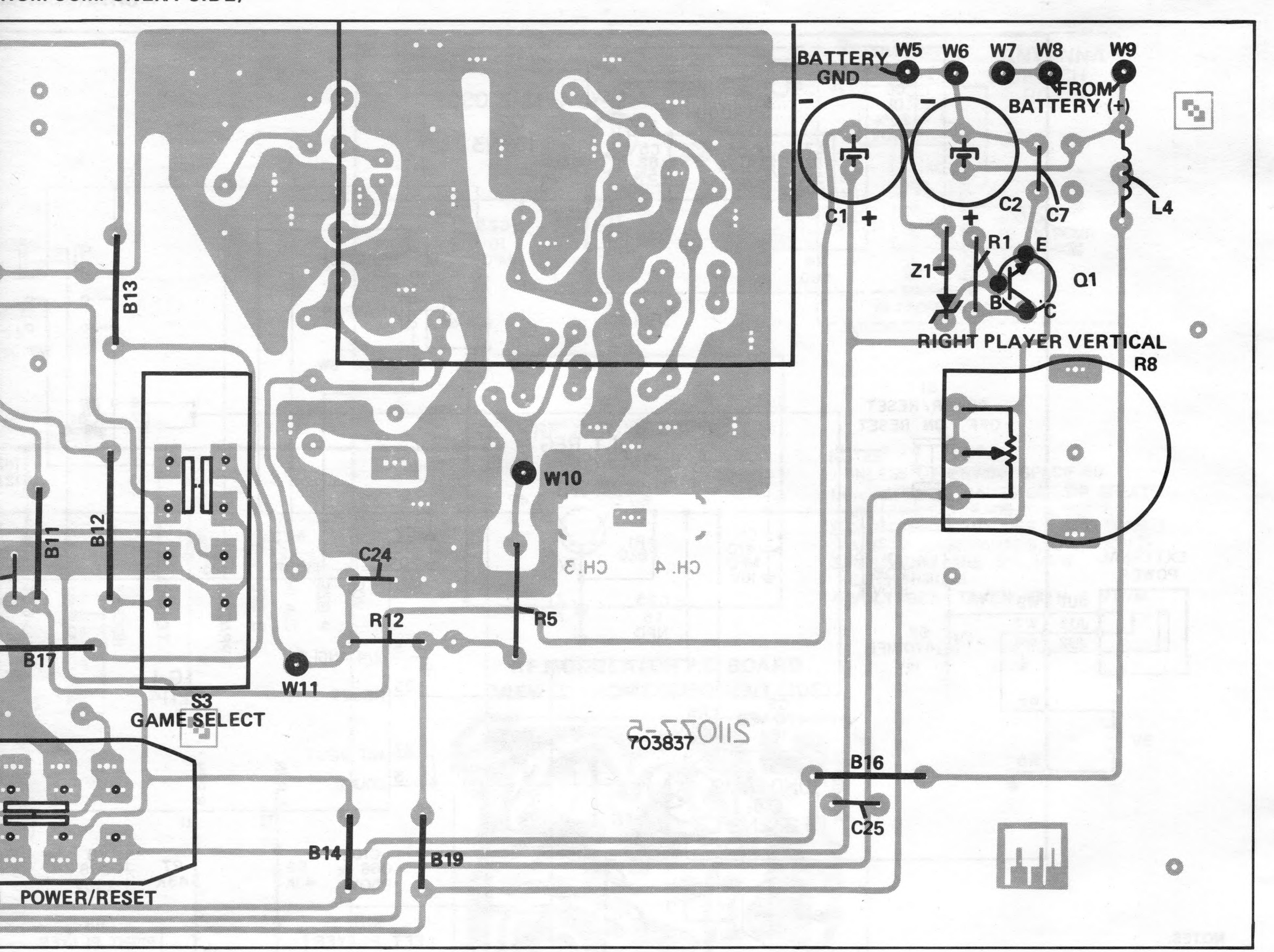
		IC1 VOLTAGE	CHART		
PIN	VOLTAGE	NOTE	PIN	VOLTAGE	NOTE
1	Not Used	••••	15	Not Used	
2	Ground		16	5.8V	••••
3	Sound		17	4.4V	
4	6.4V		18	Not Used	
5	Ground		19	Not Used	
6	B. Video		20	6.2V	5
7	6.4V	1	21	6.2V	6
8	Ground		22	6.2V	7
9	R.P. Video		23	6.2V	8
10	L.P. Video		24	W. Video	
11	1.2 to 5.4V	2	25	6.2V	9
12	1.2 to 5.4V	3	26	Ground	
13	6.2V	4	27	Sound	
14	Not Used		28	Not Used	





NOTE: Screening is reversed for the S2 Skill Switch SKILL PRACTICE
SWITCH PROFESSIONAL AMATEUR TENNIS 3 HOCKEY Pus Spr "O' Fas PLAYER CONTROL PLAYER CONTROL POWER OFF-ON/RESET SWITCH VISITING TEAM HOME TEAM (LEFT PLAYER) (RIGHT PLAYER)

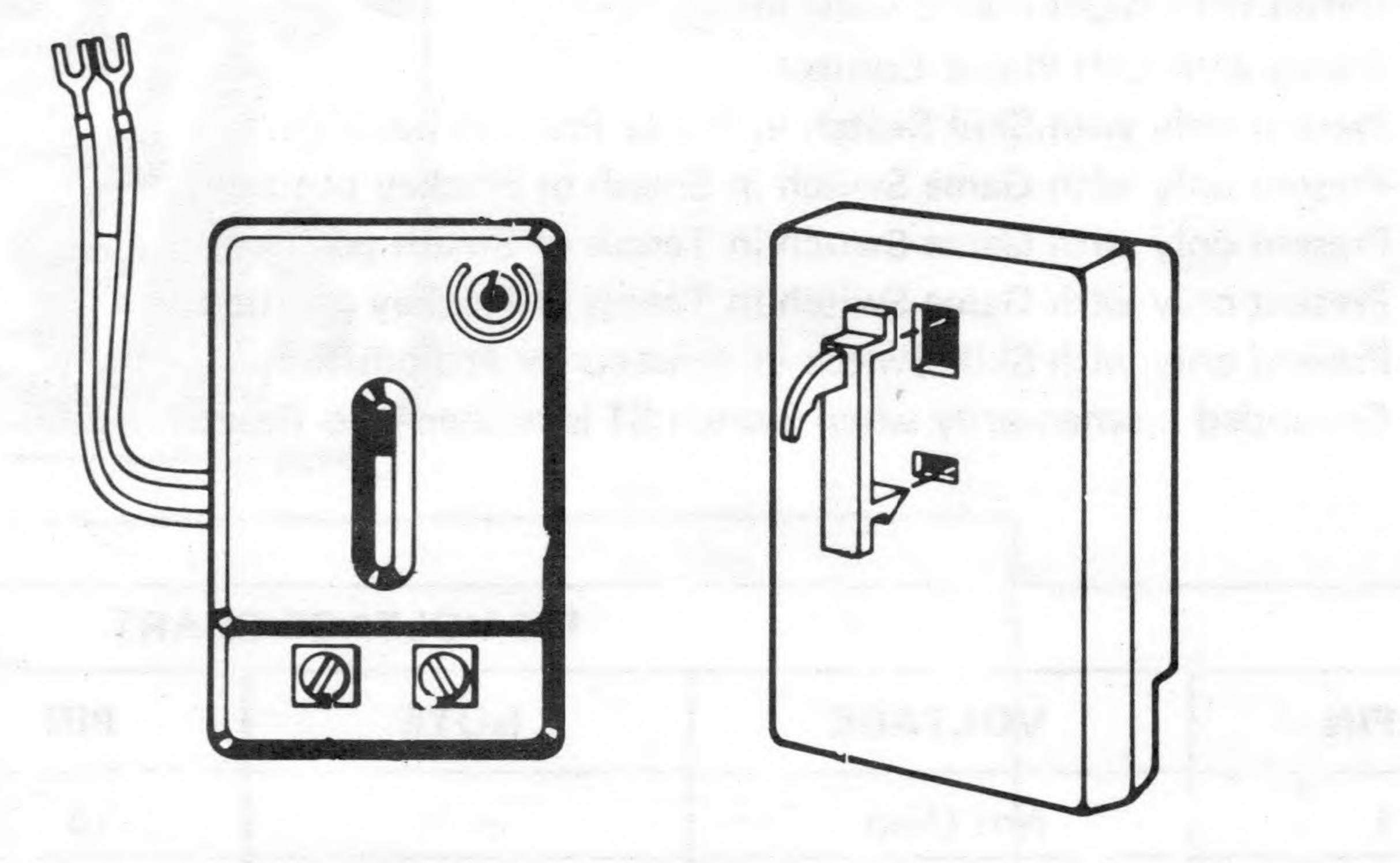
ROM COMPONENT SIDE)



and S3 Game Switch, refer to the schematic diagram.

CABINET REPLACEMENT PARTS LIST

DESCRIPTION	PART NO.
et Top et Bottom Control (Visiting Team) Control (Home Team) Visiting Team Home Team Center	143670-7 143669-5 143854-2 143854-1 151484-3 151484-4 151483-5
Black (2 used) Barrier f/Game Switch Barrier f/Skill Switch By Holder Black (4 used) Nut Fastener (4 used) Lock Nut Sing f/Stud her Stud	142695-5 151449-3 151449-3 142658-1 141737-3 103126-14 103235-1 103082-4 732953-2



ANTENNA/GAME SWITCH REPLACEMENT PARTS LIST

REF.	DESCRIPTION	PART NO.	
T1	Antenna Balun	361108-2	
S1	Antenna Game Switch	160499-3	
	Antenna Screw Terminal (2 used)	200495-1	
	Solderless Terminal (2 used)	200517-1	
J2	RF Input Socket	180902-4	
	Twin Lead Cable Assembly	782237-2	
	Antenna Case Front	143676-1	
	Antenna Case Back	143674-1	
	Plastic Hook	143719-1	
	Complete Antenna/Game Sw. Assembly	701702-6	